



Exploring Crystal Cove... Its Natural Resources and Its Earliest Inhabitants



Unit Profile

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Subject – The Land and Early Peoples of California at Crystal Cove State Park, Orange County

Grade Level – 4th Grade

Time required – 5 class periods of 50 minutes each

Contact – Winter Bonin (949) 947-7647 crystalcv@fea.net

General Description – This unit focuses on the geography, natural resources, environmental concerns, and early indigenous peoples of California who inhabited the area known as Crystal Cove in Orange County. Following a unit of study in the 4th Grade Social Studies text focusing on California's four regions, their natural resources, and California's earliest inhabitants, students will use this knowledge to further discover and demonstrate their understanding of the geography of Crystal Cove State Park, its natural resources, and how the early Native Americans used the geography and its resources to live and survive in this area.

Lesson One through Lesson Three will introduce the characteristics/physical environments and natural resources of Crystal Cove, including how physical environments and resources affect human activity. Lesson four of this unit will be a videoconference with Crystal Cove State Park. The park employee will visually show students the physical environment and natural resources of Crystal Cove (a virtual field trip). In Lesson 5, following the videoconference and using their knowledge of Crystal Cove's physical environment and natural resources, students will construct a model of a Native American village that might have been found before the Spanish explorers' contact with the early inhabitants of Crystal Cove.

California Academic Content Standards

Social Studies - Grade 4 California: A Changing State

4.1 Students demonstrate an understanding the physical and human geographic features that define places and regions in California.

4.1.1 Explain and use the coordinate grid system of latitude and longitude to determine the absolute locations of places in California and on Earth.

4.1.3 Identify the state capital and describe the various regions of California, including how their characteristic and physical environments (e.g., water, landforms, vegetation, climate) affect human activity.

4.1.5 Use maps, charts, and pictures to describe how communities in California vary in land use, vegetation, wildlife, climate, population density, architecture, services, and transportation.

4.2 Students describe the social, political, cultural, and economic life and interactions among the people of California from the pre-Columbian societies to the Spanish mission and Mexican rancho periods.

Discuss the major nations of California Indians, including their geographic distribution, economic activities, legends, and religious beliefs; and describe how they depended on, adapted to, and modified the physical environment by cultivation of land and use of sea resources.

Language Arts - Grade 4 California

1.0. WRITING STRATEGIES: Students write clear, coherent sentences and paragraphs that develop a central idea. Their writing shows they consider the audience and purpose. Students progress through the stages of the writing process (e.g., prewriting, drafting, revising, editing successive versions)

2.0. WRITING APPLICATIONS (GENRES AND THEIR CHARACTERISTICS): Students write compositions that describe and explain familiar objects, events, and experiences. Student writing demonstrates a command of standard American English and the drafting, research, and organizational strategies outlined in Writing Standard 1.0.

2.3 Write information reports:

- a. Frame a central question about an issue or situation.
- b. Include facts and details for focus.
- c. Draw from more than one source of information (e.g., speakers, books, newspapers, other media sources).

National Standards: U. S. National Geography Standards

Standard 14: How Human Actions Modify the Physical Environment

Standard 15: How Physical Systems Affect Human Systems

Standard 18: How To Apply Geography to Interpret the Present and Plan For the Future

Lesson One

Objective – Students will be able to identify and locate Crystal Cove State Park as being located in Orange County along the coastal region of California. Students will discuss the characteristics and climate of the coastal region and will complete a map of California, indicating the location of Crystal Cove State Park. The map will indicate the four major regions of California (mountain, Central Valley, desert, and coastal), Pacific Ocean, one city that is north of the park and one city that is south of the park, Crystal Cove State Park, a title for the map, a compass rose, and a legend. The map will be colored designating each region with a separate color according to the legend. Once maps are completed and displayed, “mini-introductory” videoconferencing with Crystal Cove Park Interpreter, Winter Bonin, may begin. This will allow the students to become familiar with the process of videoconferencing and to be introduced to Winter. Winter Bonin can be contacted at 949-497-7647 to arrange for the videoconferencing time.

California State Standards-Social Studies - 4.1; 4.1.1; 4.1.3; 4.1.5

Materials:

- Outline map of California
- Colored pencils
- Construction paper of various colors, 9 inches X 12 inches
- Maps of California (Atlas, text books, commercial maps)
- Videoconferencing equipment

Procedure:

Students will work individually to research and complete their map.

Each student will study a map of California to locate Crystal Cove and its surrounding area. Latitude: (33.5 N) / Longitude: 117.87W)

After becoming familiar with the location of Crystal Cove, students will draw in the four regions of California. Label each region and color each region with a separate color. Students will then label the Pacific Ocean and color it.

Locate Crystal Cove State Park and indicate with a star. Also, locate a city that is north of Crystal Cove and a city that is south of Crystal Cove and label them. These should be indicated with a dot to represent a city.

Title the map at top and add a compass rose, indicating the four major directions (N, S, E, W) and the secondary directions (NW, SW, NE, SE).

Add a legend that includes boxes and labels for the four regions of California (be sure to use same colors as on map), star for Crystal Cove, and dot for city.

Paste outline map onto colored construction paper

After the maps are completed, you may want to display on a bulletin board.

Videoconferencing: Short (approximately 10-15 minutes), introductory videoconferencing to introduce students to Interpreter and Crystal Cove State Park.

Assessment: The students completed maps will be assessed based on the attached rubric.

Lesson Two

Objective – Students will identify natural resources found in the region of Crystal Cove State Park. Students will conduct research to describe these plants and animals found at Crystal Cove. Students will organize their data onto a chart that they will use for the next lessons.

California State Standards-Social Studies: 4.2; 4.2.1

Materials:

List of plants found at Crystal Cove

List of animals found at Crystal Cove

Graphic organizer chart for plants and animals of Crystal Cove

Procedure: Students will be given a list of plants and animals found at Crystal Cove State Park. In groups of 2 – 3, students will research the plants and animals listed and will use their graphic organizer to record a description of each and classify their findings. Assessment: The student's completed graphic organizers will be assessed based on completeness of graphic organizer. Use teacher's listing of Native Plant Uses (attached) to check for accuracy and completeness.

Lesson Three

Objective – After identifying and classifying natural resources found in the region of Crystal Cove State Park, students will use this data to infer what resources the earliest indigenous peoples may have used and how they may have used these resources for their shelter, food, clothing, and for medicinal use.

California State Standards-Social Studies: 4.2; 4.2.1

Materials:

Graphic organizer from Lesson Two

Note cards, questions for the ranger (Lesson Four)

Procedure:

In groups of 2 – 3, students will discuss and infer what resources the Native Americans might have used for their daily life.

Students should focus on what the early peoples might have used for their food and shelter.

After discussing the list of possible resources that might have been used, students may still have questions about these resources found at the park. Students will write out questions (on note cards) for the content expert, to be used for Lesson Four during the video conferencing, that will aid them in visualizing what the physical environment would have been like for the Native Americans in that area, what the plants look like and their possible use, and what plants and animals could be found there that they may have used as resources for their food and shelter.

Assessment: The students note cards will be discussed and assessed prior to the video conferencing for appropriateness and content.

Lesson Four

Objective – During the video conferencing session, students will be conducted on a tour of Crystal Cove State Park. This will be an interactive interchange that will enable the students to ask questions of the content expert. Students, with the assistance of the content expert, will identify the natural resources from their graphic organizers that can be found in the region during the video conferencing. The content expert will also introduce the environmental concerns facing modern society as to the consequences-intended and unintended, positive and negative-of human modifications of the physical environment at Crystal Cove State Park as well as other areas of our state. California

State Standards-Social Studies: 4.1; 4.1.1; 4.1.3; 4.1.5; 4.2; 4.2.1

National U.S. Geography Standards: 14; 15; 18

Materials:

Video conferencing equipment

T.V. or projection unit with screen

Questions generated from Lesson 3

Graphic organizer of plants and animals from Lesson 2

Procedure: As the ranger conducts the tour of Crystal Cove, students will ask questions about the various plants and animals that can be found there.

Students will have generated these questions (on note cards) about the resources, plants, and the geography of the region prior to the video conferencing.

Students should be sure to ask questions about how the Native Americans used the resources they are being shown or ask about.

The video conferencing will take approximately 50 – 60 minutes.

Students should be prepared ahead of time with questions and be familiar with the video conferencing procedures.

Extension Lesson: Earth Day Every Day

U.S. National Geography Standard 18

As a follow up from comments from content expert during videoconferencing, students will learn to recognize how human activities can have adverse environmental consequences; and propose alternative activities to reduce the negative effects of some of these consequences.

<http://www.nationalgeographic.com/xpeditions/lessons/18/g35/earthday.html>

Lesson Five

Objective - Students will conclude their study of Crystal Cove State Park and its natural resources and the study of California's earliest inhabitants by creating and constructing a model of a village for a tribe of Native Americans that inhabited this region-the Juaneños and Luiseños. Using information gained from prior lessons and the content expert during the video conferencing, students will be able to infer what the environment might have looked like, what their shelters looked like, and what natural resources would be in this environment. Students will also be responsible for completing two well written paragraphs: one that describes the region where the village would be located, physical landmarks found in the area, what resources were available to the Native Americans, and what were the resources used for. The second paragraph will be written to describe the home type/shelter of these Native Americans, what resources were used to build the home and where they were found, how the shelter was constructed, and who was responsible for building the shelter. See attached photos of samples of model villages.

California State Standards: Social Studies: 4.2; 4.2.1 Language Arts: 1.0; 2.0; 2.3

Materials:

Materials for project will be brought to class by students.

Box to construct model village inside (go to super market and ask for boxes from soda displays)

Suggested materials that could be used for the project: clay, scissors, paint, toothpaste, plastic tubs, string, twigs, sand, gravel, small pebbles, construction paper, tissue paper

Procedure:

Day 1:

Place students in groups of 2 - 3 for project

Students will discuss what their village would look like, what the area surrounding their village might look like, what their shelter might look like, and the materials they will need to construct the model village. Remind students that they are to construct their model to replicate the physical environment, natural resources, and shelter of the Native Americans that lived at Crystal Cove.

Students will sketch their village model and assign each student in the group materials to bring in for Day 2 of lesson. Discuss with the students what they might use for a river or stream (toothpaste, paint, clay, colored paper), sand for the bottom of the box (not too much as it will be too heavy), small plants or flowers from their yards, rocks (not too big), various materials for the shelter (grasses, twigs), and any other materials they feel would complete their model. They could bring in a small, empty tub of butter, turn it over, and use glue to attach twigs to it for their shelter.

Allow approximately 20 minutes for groups to meet and decide upon materials.

Students can go to Internet resources to get descriptions of shelters used by Native Americans. See Internet resources at end of document.

Day 2:

In their groups, students will construct their village model using their sketch and materials.

Students may want to put butcher paper down on classroom floor to protect carpet or floor, or students can work outside the classroom

Allow approximately 1 to 1 1/2 hours for construction.

Day 3:

Students will prepare index cards that will be placed around the outside of their village model.

Index cards will complete the display. Students will write two paragraphs to be used to describe their display.

One paragraph will describe the region where the village was located, what physical landmarks were found there, what natural resources were available to the Native Americans, and how were the resources used.

Paragraph two will describe the home type or shelter that the Native Americans constructed in this region, what natural resources were used for the construction of the shelter, how was it constructed and who was responsible for the construction.

Assessment: Students will be assessed on their model of the village and their paragraphs. See attached rubric for assessing the model village. Student paragraphs will be assessed by a writing rubric. See attached rubric for the writing.

Some Animals Found at Crystal Cove State Park

Birds

Quail
Crow
Blackbird
Hawk
Burrowing owl
Robin
Ducks
Larks

Reptiles

Snake
Lizard

Land mammals

Ground squirrel
Cottontail rabbit
Deer
Gopher
Woodrat
Mice
Badger
Seal
Fox
Raccoon

Fish

Soupin Shark
Angel shark
Mako shark
Leopard shark
Bat ray
Shovelnose guitarfish
Spiny dogfish
Surfperch
Pacific mackerel
Sheepshead
Moray eel

Invertebrates

Grasshoppers
Yellow jacket larvae
Mussels
Balanus barnacle
Pollicipes barnacle
Collisella limpet
Scallop

Lesson One - Map Rubric

Category	5	4	3	2	1
Title	Title tells the purpose/content of the map, is clearly distinguishable as the title (e.g. larger letters, underlined, etc), and is printed at the top of the map.	Title tells the purpose/content of the map and is printed at the top of the map.	Title tells the purpose/content of the map, but is not located at the top of the map.	Purpose/content of the map is not clear from the title.	There is no title at the top of the map.
Map Legend/Key	Legend is easy-to-find and contains a complete set of symbols, including a compass rose.	Legend contains a complete set of symbols, including a compass rose.	Legend contains an almost complete set of symbols, including a compass rose.	Legend lacks several symbols.	Legend is absent.
Labels-Accuracy	At least 90% of the items are labeled and located correctly.	80-89% of the items are labeled and located correctly.	79-70 % of the items are labeled and located correctly.	69-60% of the items are labeled and located correctly.	Less than 60% of the items are labeled and located correctly.
Neatness of color and Lines	All straight lines are ruler-drawn, all errors have been neatly corrected and all features are colored completely.	All straight lines are ruler-drawn, all errors have been neatly corrected and most features are colored completely.	All straight lines are ruler-drawn, most errors have been neatly corrected and most features are colored completely.	Most straight lines are ruler-drawn, most errors have been neatly corrected and most features are colored completely.	Many lines, corrections of errors, and/or features are not neatly done.
Spelling/Capitalization	95-100% of words on the map are spelled and capitalized correctly.	94-85% of words on the map are spelled and capitalized correctly.	85-75% of words on the map are spelled and capitalized correctly.	75-70% of words on the map are spelled and capitalized correctly.	Less than 70% of words on the map are spelled and capitalized correctly.

Lesson Five – Paragraph Rubric

Criteria	4	3	2	1
Summary Paragraph	<ul style="list-style-type: none"> • Well organized, demonstrates logical sequencing and sentence structure. • All components completed correctly. • Student has demonstrated the ability to synthesize information correctly into his/her own words. 	<ul style="list-style-type: none"> • Well organized, but demonstrates illogical sequencing or sentence structure. • All components were completed correctly. • Student has demonstrated the ability to synthesize information correctly into his/her own words. Parts of the explanation may be confused or difficult to understand. 	<ul style="list-style-type: none"> • Well organized, but demonstrates illogical sequencing and sentence structure. • Most of the components were completed correctly. • Student has demonstrated a weak ability to synthesize information correctly into his/her own words. Parts of the explanation are copied directly from the source or are confused or difficult to understand. 	<ul style="list-style-type: none"> • Weakly organized. • Most of the components were answered incorrectly or incomplete. • Student has demonstrated a weak ability to synthesize information correctly into his/her own words. Most or all of the explanation are copied directly from the source or are confused or difficult to understand.
Punctuation, Capitalization, & Spelling	Punctuation and capitalization are correct.	There is one error in punctuation and/or capitalization.	There are two or three errors in punctuation and/or capitalization.	There are four or more errors in punctuation and/or capitalization.

Teacher Comments:

Lesson Five – Village Model Rubric

Group Members: • • •		4	3	2	1
Originality/Authenticity:	Region depicted correctly				
	Home type/shelter depicted correctly				
	Resources depicted correctly				
Cooperation in working with fellow tribe members					

Total points: _____

Final Grade for Native American Village Model: _____

Teacher Resources

Web Sites

Fourth Grade California Academic Content Standards for Fourth Grade:
<http://goldmine.cde.ca.gov/standards/history/grade4.html>

National Academic Content Standards:
<http://www.nationalgeographic.com/xpeditions/standards/matrix.html>

Crystal Cove State Park:
http://www.parks.ca.gov/default.asp?page_id=644

California's Natural Resources
http://ceres.ca.gov/natural_resources/index.html

The Spanish Missions of California Picture of Native American shelter.
<http://library.thinkquest.org/3615/tour16a.html>

Books

Common Edible and Useful Plants of the West by Muriel Sweet Publisher: Naturegraph Pub; (December 1976) ISBN: 0879610468

Flowering Plants by Nancy Dale Publisher: Capra Press; (March 1986) ASIN: 0884962393

Shore Wildflowers by Philip A. Munz Publisher: University of California Press; (December 1976) ASIN: 0520009037

Native Shrubs of Southern California by Peter H. Raven Publisher: University of California Press; (November 1989) ISBN: 0520010507

The California Chaparral: An Elfin Forest by W.S. Head Publisher: Naturegraph Pub; (December 1972) ISBN: 0879610026

Video

Visiting... With Huell Howser Show #321 "Crystal Cove" Length: 30 minutes
1-800-266-5727